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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/765,146

01/28/2004

Guerino G. Sacripante

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27074 7590 08/19/2009

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EXAMINER

MCCULLEY, MEGAN CASSANDRA

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

08/19/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/765,146	<b>Applicant(s)</b> SACRIPANTE ET AL.	
	<b>Examiner</b> Megan McCulley	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-7,10,11 and 13-38 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 and 24-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-7, 10, 11, 13-16, 21-23, 30-38 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

Claim 22 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 22 is identical to claim 11.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3, 5-7, 21, 33, 34, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US 2002/0107306).

Regarding claim 1: Wang et al. discloses a method of making a powder comprising aggregating/dispersing in an aqueous dispersion epoxy resin particles (para. 10), coalescing the particles (para. 41), adding a crosslinking agent with amino functional groups (para. 22) and removing/drying the particle dispersion (para. 26). Wang et al. also teaches that the dispersion can contain a compound such as zirconium sulfate (para. 23), which is a transition metal salt, which according to the instant specification (para. 54) will act as an aggregating agent. While Wang et al. does not disclose this compound specifically with the epoxy and the amine in the examples, a

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person having ordinary skill in the art would have found it obvious to choose this compound from the list of the finite number of identified, predictable compounds given in paragraph 23 and would have had a reasonable expectation of success. A person having ordinary skill in the art at the time of the invention would additionally have been motivated to use this compound since Wang et al. discloses it also acts as a crosslinking agent.

Regarding claim 3: Wang et al. teaches epoxy resins (para. 10).

Regarding claims 5 and 6: Wang et al. teaches adding a pigment to the dispersion (para. 25).

Regarding claim 7: Wang et al. teaches a curing agent/crosslinking agent (para. 24).

Regarding claim 21: Wang et al. teaches epoxy resins (para. 10).

Regarding claim 33: Wang et al. teaches operating at a temperature above the glass transition temperature (para. 10 and 14).

Regarding claim 34: Wang et al. teaches at least 50% by weight of the epoxy resin (para. 10).

Regarding claim 37: Wang et al. teaches a styrene acrylate resin (para. 21).

Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US 2002/0107306) as applied to claim 1 above and in further view of Davydov et al. (U.S. Pat. 6,491,973).

Regarding claims 30 and 31: Wang et al. teaches the basic process as set forth above. Not disclosed is dry-blending the fused particles with at least one additive. However, Davydov et al. teaches dry-mixing/dry-blending particles with additives such as filler (col. 2 lines 26-31). Wang et al. and Davydov et al. are analogous art because they are both concerned with the same field of endeavor, namely resin particles for coating metal substrates. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the dry-mixing technique of Davydov et al. with the process of Wang et al. and would have been motivated to do so for such desirable properties as a more homogenous coating composition.

Claims 32, 36, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US 2002/0107306) as applied to claims 1 and 7 above and in further view of Patel et al. (U.S. Pat. 6,210,853).

Regarding claim 32: Wang et al. teaches the basic claimed composition as set forth above. Not disclosed is aggregating at a temperature below the glass transition temperature. However, Patel et al. teaches heating to a temperature below the T<sub>g</sub> of the resin to aggregate the particles (col. 4 lines 19-21). Wang et al. and Patel et al. are analogous art since they are both concerned with the same field of endeavor, namely making particles in an aqueous dispersion. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the temperature of Patel et al. with the method of Wang et al. and would have been motivated to do so for such

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desirable properties as lowering the cost of production by not raising the temperature very high.

Regarding claim 36: Wang et al. does not teach the geometric size distribution. However, Patel et al. teaches a geometric size distribution, GSD, from 1.15-1.24 (col. 4 line 63), which overlaps the claimed range. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the GSD of Patel et al. with the method of Wang et al. and would have been motivated to do so since Wang et al. suggests a narrow size distribution is achieved (para. 13).

Regarding claim 38: Wang et al. does not teach the specific colors of the pigments. However, Patel et al. teaches cyan, magenta and yellow pigments (col. 11 line 54). At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the color of Patel et al. with the method of Wang et al. and would have been motivated to do so for the desired finished coating color.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US 2002/0107306) as applied to claims 1 and 7 above and in further view of Sacripante et al. (U.S. Pat. 5,989,629).

Regarding claim 35: Wang et al. teaches the basic claimed method as set forth above. Not disclosed is the amount of the colorant. However, Sacripante et al. teaches a polyester resin in an amount of 75-95 percent and from about 5-25 percent of titanium oxide, which is a colorant (col. 7 lines 8-14), which overlaps the claimed ranges. Wang et al. and Sacripante et al. are analogous art since they are both concerned with the

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same field of endeavor, namely making resin particles in aqueous dispersions. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the amount of colorant of Sacripante et al. in the method of Wang et al. and would have been motivated to do so for such desirable properties as a sufficiently colored coating material.

Claims 10, 11, 13-16, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US 2002/0107306).

Regarding claims 10, 11: Wang et al. discloses a method of making a powder comprising aggregating/dispersing in an aqueous dispersion epoxy resin particles (para. 10), adding a crosslinking agent with amino functional groups (para. 22) to the dispersion, coalescing the particles (para. 41), and removing/drying the particle dispersion (para. 26). Wang et al. also teaches that the dispersion can contain a compound such as zirconium sulfate (para. 23), which is a transition metal salt, which according to the instant specification (para. 54) will act as an aggregating agent. While Wang et al. does not disclose this compound specifically with the epoxy and the amine in the examples, a person having ordinary skill in the art would have found it obvious to choose this compound from the list of the finite number of identified, predictable compounds given in paragraph 23 and would have had a reasonable expectation of success. A person having ordinary skill in the art at the time of the invention would additionally have been motivated to use this compound since Wang et al. discloses it also acts as a crosslinking agent.

Regarding claims 13 and 14: Wang et al. teaches adding a pigment to the dispersion (para. 25).

Regarding claim 15: The method of disclosed in Wang et al. makes the powder particles (abstract).

Regarding claim 16: Wang et al. teaches the particles have a size of less than 5 microns (para. 41).

Regarding claims 22, 23: Wang et al. teaches epoxy resins (para. 10).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 3, 5-7, 10, 11, 13-16, 21-23, and 30-38 have been considered but are moot in view of the new ground(s) of rejection. The remarks that still pertain to the above rejection are addressed below.

A) Applicant's argument that Wang et al. does not teach aggregating, in a controlled manner with the use of an aggregating agent, the submicron particles to micron particle size particles is not persuasive. Firstly, the claims do not require the particles to be aggregated from the submicron size to the micron size. In fact, the only size mentioned in the claims is in claim 16, which limitation Wang et al. teaches (para. 41). Secondly, Wang et al. teaches zirconium sulfate, a transition metal salt, in the dispersion. As evidenced by the instant specification, transition metal salts are aggregating agents. Lastly, giving the term "aggregate" the broadest reasonable definition, which is to gather or to collect in a mass or whole, Wang et al. teaches aggregation of particles in that the particles gather into a mass by phase inversion.



B) Applicant's argument that Wang et al. does not describe steps (b) and (d) is not persuasive. The drying step mentioned in paragraph 26 is the coalescing step in that the particles come together and the water is removed. Since the claim states "comprising", the method is open to other steps not specifically claimed, including a step of coating. Therefore, the coating step of Wang et al. does not negate that the other steps are disclosed. Further, Wang et al. specifically states that in an especially preferred embodiment, a polymer is included to facilitate the washing out process and the coalescing process of the epoxy containing particles (para. 41), indicating the steps (b) and (d) are met.

C) Applicant's argument that Wang et al. teaches away from the aggregation step is not persuasive. The preference of Wang et al. to have very fine submicron particles does not teach away from aggregation, it merely indicates the level of aggregation desired by the reference. No size limitations are claimed.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Megan McCulley whose telephone number is (571)270-3292. The examiner can normally be reached on Monday - Thursday 7:30-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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